

Remarks/Arguments

Entry of the following response, as well as reconsideration and withdrawal of the rejections of record, is respectfully requested.

Summary of Status of Amendment and Office Action

In the present amendment, no claims are added or cancelled, and claim 77 is amended. Therefore, claims 1-6, 8-11, 15, 16, 18, 19, 21-52, 54-56, 58-71, 77-82, 84-86, 88-106, 108-115, 117 and 118 are pending in the application, with claims 1, 47, 77, and 98 being independent.

Claim 77 is amended to correct a formatting error, and to recite the addition of the composition to a cellulosic slurry or suspension such as disclosed, *inter alia*, on page 11 of the specification.

In the Office Action dated July 18, 2005, all claims are rejected under 35 U.S.C. § 103 (a) as being unpatentable over U.S. Patent No. 5,698,305 (hereinafter "SUZUKI").

Information Disclosure Statements

Applicants express appreciation for the inclusion with the Office Action of initialed copies of the Forms PTO-1449, whereby the Examiner's consideration of the Second Supplemental Information Disclosure Statement filed October 18, 2004 is of record.

Applicants note that the Office Action did not include an initialed copy of the Form PTO-1449 submitted with the Supplemental Information Disclosure Statement filed February 1, 2001. Thus, Applicants request that the Examiner send Applicants an initialed copy of the Form PTO-1449 in the next communication from the U.S. Patent and

Trademark Office, so that the Examiner's consideration of the disclosure statement is clearly reflected in the record.

Response to Rejection under 35 USC § 103 (a)

Claims 1-6, 8-11, 15, 16, 18, 19, 21-52, 54-56, 58, 71, 77-82, 84, 86, 88-106, 108-115, 117 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over SUZUKI.

The rejection asserts that SUZUKI discloses a newsprint paper coated with a surface treating agent comprising at least one water-soluble component comprising at least one functional group that undergoes a cross-linking reaction, such as a polyacrylamide-based compound; and at least one film-forming polymer such as vinyl acetate/maleic acid half ester copolymer. The rejection asserts that SUZUKI teaches that the composition may further contain various ingredients including latexes and reactive sizing agents such as AKD and alkylsuccinic anhydride, which is asserted to be the same as component C) in the presently claimed composition. Thus, the rejection asserts that it would have been obvious to prepare and use the presently-claimed composition for paper. It is the position in the rejection that other substrates that SUZUKI does not disclose would be well within the skills of the ordinary practitioner, and hence would have been obvious.

In response, Applicants remind the Examiner that the claimed subject matter includes an aqueous composition comprising: (A) at least one water-soluble component comprising at least one functional group that undergoes a crosslinking reaction; (B) at least one film-forming polymer; and (C) at least one component which provides at least one of

moisture barrier properties and/or vapor barrier properties greater than that provided by a combination of components (A) and (B) alone; compositions additionally comprising fluoacids; as well as methods of preparing and using the compositions, including various products and substrates

As an initial matter, Applicants respectfully point out that the rejection does not establish a *prima facie* case of obviousness. It would not have been obvious to modify SUZUKI to arrive at the presently claimed invention, because SUZUKI is directed toward an entirely different invention than the methods, compositions, products and substrates currently claimed.

SUZUKI is directed toward coating compositions containing a polyacrylamide-based compound and a vinyl acetate/maleic acid half ester, and specifically toward use of the compositions as coatings for newsprint. The SUZUKI compositions can contain other ingredients, such as latexes as binders, as disclosed in column 9. The rejection also points to column 10 for the proposition that the SUZUKI compositions can contain reactive sizes such as AKDs. However, this list of materials at columns 9 and 10 is merely a broad listing of materials, and there is no indication that one having ordinary skill in the art would pick and choose from amongst these ingredient to arrive at the subject matter included in Applicants' claims.

Moreover, Applicants draw the Examiner's attention to column 10, beginning at line 7, where SUZUKI clearly states that the reactive size may be part of the base newsprint. Nowhere does SUZUKI disclose or suggest that a sizing agent can be part of the aqueous

composition. The portion of SUZUKI the rejection relies upon for teaching reactive sizes such as AKDs merely states that the newsprint to be coated with the compositions may comprise a host of other ingredients, among which are included fillers, strength agents, freeness/yield improvers, sizing agents and other agents. Thus, at most, this is merely a teaching that the SUZUKI aqueous compositions may be used to coat newsprint that has been previously sized.

It is respectfully submitted, therefore, that SUZUKI would not motivate the person of ordinary skill in the art to add a component (C) as recited in Applicants' claims to the SUZUKI coating compositions. Moreover, it is also respectfully submitted that the person of ordinary skill in the art would not consider the presently-claimed compositions or methods to be taught or suggested by SUZUKI. For at least the above reasons, the rejection does not establish a *prima facie* case of obviousness.

More particularly, for at least the above reasons, SUZUKI does not teach or suggest an aqueous composition comprising (A) at least one water-soluble component comprising at least one functional group that undergoes a crosslinking reaction; (B) at least one film-forming polymer; and (C) at least one component which provides at least one of moisture barrier properties and/or vapor barrier properties greater than that provided by a combination of components (A) and (B) alone, as recited in independent claim 1, and in claims 2-6, 8-11, 15, 16, 18, 19, and 21-46 that directly or indirectly depend from claim 1.

Similarly, SUZUKI does not teach or suggest a method of preparing a coated substrate which comprises (1) coating a substrate with a coating composition comprising:

(A) at least one water-soluble component comprising at least one functional group that undergoes a crosslinking reaction; (B) at least one film-forming polymer; and (C) at least one component which provides at least one of moisture barrier properties and/or vapor barrier properties greater than that provided by a combination of components (A) and (B) alone; and (2) curing the coating composition on the substrate, as recited in claim 47, and in claims 48-52, 54-56, and 58-71 that depend directly or indirectly from claim 47.

Further, for at least the above reasons, SUZUKI does not teach or suggest a method of preparing cellulosic products which comprises: substantially simultaneously or sequentially adding a composition to a system comprising a cellulosic slurry or suspension, the composition comprising: (A) at least one water-soluble component comprising at least one functional group that undergoes a crosslinking reaction; (B) at least one film-forming polymer; and (C) at least one component which provides at least one of moisture barrier properties and/or vapor barrier properties greater than that provided by a combination of components (A) and (B) alone, as recited in independent claim 77, and claims 78-82, 84-86, and 88-97 that depend directly or indirectly from claim 77.

Yet further, for at least the above reasons, SUZUKI does not teach or suggest a method for forming a substantially chromium-free, dried in place conversion coating on a metal surface comprising applying to a metal surface: (1) an aqueous composition comprising (A) at least one water-soluble component comprising at least one functional group that undergoes a crosslinking reaction; (B) at least one film-forming polymer; and (C) at least one component which provides at least one of moisture barrier properties and/or

vapor barrier properties greater than that provided by a combination of components (A) and (B) alone; and (2) fluoacid, wherein the amount of the composition in (1) is from about 0.1 to about 90% by weight, and wherein the amount of fluoacid is from about 0.2 to about 20% by weight, as recited in independent claim 98, and in claims 99-106, 108-115, 117 and 118 that depend directly or indirectly from claim 98.

It is also respectfully noted that SUZUKI clearly limits itself to coating compositions for newsprint paper. See, for example, the title ("Newsprint Paper"), the abstract ("A newsprint paper coated with . . . "), the summary of the invention ("The above object is attained by a newsprint paper coated on the surface with a surface treating agent comprising a polyacrylamide-based compound and a vinyl acetate/maleic acid half ester copolymer.") (column 2, lines 62-65), and numerous other places, including column 3, through line 40. Thus, not only do the SUZUKI compositions not contain sizing agents, the disclosure provides no motivation to use the compositions on any substrate other than newsprint. For at least this additional reason, SUZUKI does not teach or suggest the subject matter recited in numerous other dependent and independent claims.

For example, because SUZUKI is limited to newsprint, SUZUKI does not teach or suggest use of the compositions on metal substrates, or compositions that contain a fluoacid, such that any claims reciting either or both of these limitations are not taught or suggested by SUZUKI for at least this additional reason. Either or both limitations are recited in at least dependent claims 22, 23, 26-31, 40-43, 62-69, independent claim 98, and dependent claims 99-106, 108-115, 117 and 118. Thus, for at least this additional

reason, these claims are also patentable over SUZUKI. Similarly, claims 34 and 96 (directed toward ceiling tiles), and claims 35, 46 and 97 (directed toward nonwoven materials), are also patentable over SUZUKI at least for these additional reasons.

Moreover, because SUZUKI is limited to coating compositions for newsprint paper, it does not teach or suggest other presently-recited compositions, such as paints, as recited in claim 37.

Further, the rejection does not state where presently recited proportions are taught or suggested by SUZUKI. Applicants respectfully submit that SUZUKI does not teach or suggest Applicants' composition, and, therefore, cannot teach or suggest the respective proportions of ingredients presently recited. SUZUKI only makes a broad general statement about sizing agents being acceptable in the base paper, and certainly does not teach or suggest the proportions of (A) and (B) to (C) recited at least in dependent claims 19, 21, 23, 29-31, 39-46, 60, 61, 63, 67-69, 90, 91, 94-97, 112, 113, and 118. Thus, for at least this additional reason, these claims are also patentable over SUZUKI.

Yet further, the rejection does not state where SUZUKI discloses or suggests that the functional group that undergoes the crosslinking reaction comprises at least one of epoxy or azetidinium. It is respectfully submitted that SUZUKI does not teach or suggest these functional groups, such that any claims reciting this limitation are not obvious in view of SUZUKI for this additional reason. This is a limitation at least of claims 6, 52, 82 and 106.

Moreover, even had the rejection established a *prima facie* case of obviousness (which Applicants maintain is not the case), the claimed compositions and methods of the present invention yield unexpected results sufficient to rebut a *prima facie* case of obviousness. In this regard, In re Soni, 34 USPQ2d 1684, 1687-1688 (Fed. Cir. 1995), held that a showing of substantially improved results for invention, and a statement that results were unexpected suffices to establish unexpected results absent evidence to the contrary. *Id.* at 1687-88.

In this case, the specification states that compositions and methods of the present invention have properties that are

more favorable than that which would be expected to be supplied by each component, separately, particularly in view of the fact that the resultant composition exhibits positive aspects of each of the components, while certain negative aspects that would be expected by use of each component, separately, are not exhibited.

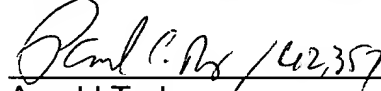
(Disclosure at page 35, lines 1-6). Therefore, since the specification discloses unexpected and improved results, this case involves patentable subject matter just as In re Soni involved a patentable invention. Accordingly, all pending claims should be found patentable over SUZUKI.

CONCLUSION

For the reasons advanced above, Applicants respectfully submit that all pending claims patentably define Applicants' invention. Allowance of the application with an early mailing date of the Notices of Allowance and Allowability is therefore respectfully requested.

Should the Examiner have any further comments or questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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A handwritten signature in dark ink, appearing to read "Arnold C. Turk / 42,357", is written over a horizontal line.

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October 12, 2005
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